IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
(Attorney Docket № 14218US02)

In the Application of:

Martin Lund

Serial No. 10/646,976

Filed: August 22, 2003

For: A METHOD AND SYSTEM TO
PROVIDE PHYSICAL PORT
SECURITY IN A DIGITAL
COMMUNICATION SYSTEM

Examiner: Joseph T. Pan

Group Art Unit: 2435

Confirmation No. 1056

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APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Applicant respectfully requests that the Board of Patent Appeals and Interferences reverse the final rejection of claims 1-24 of the present application. This Appeal Brief is timely because it is being filed within one month of the February 25, 2010 mailing date of the Notice of Panel Decision from Pre-Appeal Brief Review.

REAL PARTY IN INTEREST
(37 C.F.R. § 41.37(c)(1)(i))

The real party in interest is Broadcom Corporation, a corporation organized under the laws of the state of California, having a place of business at 5300 California Avenue, Irvine, California 92617.

RELATED APPEALS AND INTERFERENCES
(37 C.F.R. § 41.37(c)(1)(ii))

The Appellant is unaware of any related appeals or interferences.

STATUS OF THE CLAIMS
(37 C.F.R. § 41.37(c)(1)(iii))

The present application includes pending claims 1-24 all of which have been rejected. The Applicant identifies claims 1-24 as the claims that are being appealed. The text of the pending claims is provided in the Claims Appendix.

STATUS OF AMENDMENTS
(37 C.F.R. § 41.37(c)(1)(iv))

Subsequent to the final rejection of claims 1-24 in the Office Action mailed December 2, 2009 ("Final Office Action" or "Final OA"), the Applicant filed a Pre-Appeal Brief Request for Review. No claim amendments have been made following issuance of the Final Office Action.

SUMMARY OF CLAIMED SUBJECT MATTER
(37 C.F.R. § 41.37(c)(1)(v))

Claim 1, which is representative of the independent claims, recites the following:

1.   A method of providing physical port security in a digital communication system,[1] comprising:

receiving[2] a frame of digital data at a network device;

generating[3] a destination port bit map[4] based on the destination address information contained in said frame of digital data;

comparing[5] said destination port bit map with a physical port security bit map[6] to generate a bit map of allowed destination ports,[7] wherein said physical port security bit map is generated, after said receiving, based on information in said received frame of digital data;[8] and

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[1] *See e.g.,* Application, p. 5, ¶ 14, lines 1-6; *see also id.,* Fig. 1, ref. 100.

[2] *See e.g., id.,* p. 6, ¶ 20, lines 1-4; *see also id.,* Fig. 2, ref. 201.

[3] *See e.g., id.,* p. 6, ¶ 20, lines 4-6, Fig. 2, ref. 202; *see also id.,* p. 7, ¶ 24, lines 1-7.

[4] *See e.g., id.,* p. 7, ¶ 22, lines 1-3; *see also id.,* p. 8, ¶ 25, lines 1-5; *see also id.,* Fig. 3, ref. 302.

[5] *See e.g., id.,* p. 6, ¶ 20, lines 6-10; *see also id.,* Fig. 2, refs. 203 and 204; *see also id.,* p. 8, ¶ 0026, lines 1-9; *see also id.,* Fig. 3, ref. 300.

[6] *See e.g., id.,* p. 7, ¶ 22, lines 1 to ¶ 23, line 11; *see also id.,* Fig. 3, ref. 301.

[7] *See e.g., id.,* p. 8, ¶ 26, lines 2-9; *see also id.,* Fig. 3, ref. 303.

[8] *See e.g., id.,* p. 6, ¶ 20, lines 1-8; *see also id.,* Fig. 2, refs. 202 and 203.

forwarding[9] said frame of digital data to one or more of said allowed destination ports.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL
(37 C.F.R. § 41.37(c)(1)(vi))

Claims 1, 7, 10-12, 18, and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 4,896,934 ("Arthurs")[10] in view of U.S. 7,151,777 ("Sawey").

Claims 2-6, 8-9, 13-17, and 19-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Arthurs in view of Sawey, further in view of U.S. 6,484,261 ("Wiegel")[11]

ARGUMENT
(37 C.F.R. § 41.37(c)(1)(vii))

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

> The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

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[9] *See e.g., id.*, p. 6, ¶ 20, lines 10-12; *see also id.*, Fig. 2, ref. 205.

[10] The Final Office Action refers to Authurs as "Authors." It is assumed this is a typographical error.

[11] The Final Office Action refers to Wiegel as "Wieget." It is assumed that this is a typographical error.

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness:

> The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

Obviousness also requires that the Examiner provide "some articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness." *See KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) quoting *In re Kahn*, 441 F.2d 997,988 (CA Fed. 2006). Put another way, the Examiner should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR*, 127 S. Ct. at 1741. The Examiner should make "explicit" this rationale of "the apparent reason to combine the known elements in the fashion claimed," including a detailed explanation of "the effects of demands known to the design community or present in the marketplace" and "the background knowledge possessed by a person having ordinary skill in the art." *Id.*

With these principals in mind, the Applicant turns to the claim rejections.

I. Claims 1, 7, 10-12, 18, and 24 Are Patentable Over The Proposed Combination of Arthurs and Sawey

The Applicant now turns to the rejection of claims 1, 7, 10-12, 18, and 24 as being unpatentable over Arthurs in view of Sawey. The Applicant notes that the proposed combination of Arthurs and Sawey forms the basis for all of the pending rejections.

A. Rejection of Independent Claims 1 and 12 under 35 U.S.C. § 103(a)

Claims 1 and 11 recite, in part, "generating a destination port bit map based on the destination address information contained in said frame of digital data." In this regard, the Examiner has equated Arthurs' destination bitmap field (as illustrated in Fig. 3 of Arthurs) to the claimed "destination port bit map." (*See, e.g.,* Final OA, p. 2.) However, the destination bit map field of Arthurs is not a "[generated] . . . based on the destination address information contained in said frame of digital data," as require by the claims. Instead, it is merely one of the fields contained in each of the data packets that arrive at the input ports 12. (*See, e.g.,* Arthurs, col. 5, lines 39-54.) Thus **it is received** at the network device; it is **not generated** as required by the claims of the present application.

The Examiner recognizes this deficiency of Arthurs. Specifically, although the Examiner alleges that "Authurs (*sic.*) further discloses the destination port bit map," in the very next sentence he concedes that "Authurs (*sic.*) does not specifically mention generating the destination port map." (*See* Final OA, p. 3.) In order to make up for this

deficiency in Arthurs, the Examiner proposes combining Arthurs with Sawey. (*See, e.g.,* *id.*) In this regard, the Examiner states:

> Sawey teaches a crosspoint switch having multicast functionality, wherein Sawey discloses generating the destination port bit map based on the destination address contained in the frame of the digital data (see figure 4, elements 100 'receive multicast packet', 102 'generate port map mapping multicast address to destination output ports'; and column 7, lines 41-45, of Sawey,

(Final OA, p. 3.) Putting aside for the moment whether or not this is an accurate assessment of Sawey, the Examiner has failed to provide "articulated reasoning with some rationale underpinning to support the legal conclusion of obviousness" in the detailed manner described in *KSR*. Rather, the Examiner attempts to support the claim rejections as follows:

> It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Sawey into the method of Authurs (*sic.*) to generate a destination port bit map.
>
> The ordinary skilled person would have been motivated to have applied the teaching of Sawey into the system of Authurs (*sic.*) to generate a destination port bit map because Authurs (*sic.*) teaches "The present invention relates to an optical switch for use in a fiber optic telecommunications network, and more particularly, to an optical switch <u>with multicast capability</u>. . . . Sawey teaches "The present invention relates generally to packet switching and, more particularly, to a crosspoint switch <u>having multicast functionality</u>. . . Therefore, Sawey's teaching could enhance Authurs's (*sic.*) system.

(*Id.* (emphasis in original).) In other words, the Examiner apparently alleges that because both Sawey and Arthurs have "multicast capabilities" a person of ordinary skill in the art would have been motivated to incorporate Sawey's alleged teaching of "generating a destination port bit map" into Arthurs'. The Examiner fails to explain any

motivation for making this combination. The mere fact Sawey and Arthurs both have "multicast capabilities" does not provide a motivation to combine these references. The Examiner also makes the unsupported allegation that "Sawey's teaching could enhance Authurs's (*sic.*) system." (*See* Final OA, p. 3.) The Examiner provides no explanation of how Arthurs' system would allegedly be enhanced. Notably, in suggesting that a person skilled in the art would combine these references the Examiner ignores the fact that he also contends that "Authurs (*sic.*) [already] discloses the destination port bit map . . . although Authurs (*sic.*) does not specifically mention generating the destination port map." (*Id.*) Why would a person of ordinary skill in the art would incorporate Sawey's alleged teaching ("generating the destination port bit map . . .") into Arthurs' system if, as alleged by the Examiner, "Authurs (*sic.*) [already] discloses the destination port bit map?" The answer is that a person of ordinary skill in the art simply would not make this combination. There would be no need to "generate" a destination bit map if it already existed.

In conclusion, there simply is no rationale basis for combining the references in the manner suggested by the Examiner. Instead, the Examiner appears to be proposing the combination based solely on improper hindsight. As such, the rejections based on the proposed commination of Arthurs and Sawey are improper and should be withdrawn.

Moreover, even if the references are combined in the manner suggested by the Examiner, independent claims 1 and 10 are still patentable because the resulting combination does **not** include at least the following limitation of claim 1:

[C]omparing said destination port bit map with a **physical port security bit** map to generate a bit map of allowed destination ports, wherein said **physical port security bit map** is generated, after said receiving, based on information in said received frame of digital data.

Neither Arthurs nor Sawey, alone or in combination, disclose or suggest a "physical port security bit map" as required by this claim element. As such, they also do not disclose or suggest "comparing said destination port bit map with a **physical port security bit map.**" In rejecting the claims, the Examiner equates with Arthurs' "Output Availability Field" in a token with the "physical port security bitmap" recited in the pending claims. (Final O.A., p. 7-9.) However, Arthurs' Output Availability Field in a token is **not** a physical port security bitmap of allowed destination ports. Rather, **the Output Availability Field of a complete token is a list of all output ports (not only allowed destination ports), and it indicates which output port has been reserved to receive transmitted data.** (*See* Arthurs at col. 5, line 58 – col. 6, line 3.) Sawey does not overcome this deficiency of Arthurs.

Furthermore, assuming *arguendo*, that Arthurs' Output Availability Field is in fact a physical port security bitmap of allowed destination ports, Arthurs and Sweeny, alone or in combination, fail to disclose or suggest that "said **physical port security bit map** is generated, after said receiving, based on information in said received frame of digital data." More specifically, according to Arthurs, **the token (including its Output Availability Field) is written during the first control phase (the "write phase"), which takes place at the input ports and prior to transmitting the data and the token to the reception side (i.e., the output ports).** (*See, e.g.,* Arthurs, col. 6, lines 4-

9 and 16-21.) This is clearly illustrated in Fig. 1 of Arthurs, where the token generator generates the empty token, and then the Output Availability Field of the empty token is filled out as it "travels" from input port to input port and then to the output ports of the receive side. In this regard, **Arthurs' Output Availability Field is not generated <u>after</u> <u>receiving</u> of the frame of digital data.** Furthermore, generating of Arthurs' Output Availability Field is also not based on information in the received frame of digital data (since it was generated prior to the digital data is even transmitted to the output ports). Sawey does not overcome this deficiency of Arthurs.

Based on the foregoing, claims 1 and 10 are patentable over Arthurs in view of Sawey. Thus, the Applicant requests that the Board reverse the rejections of claims 1 and 12.

B.   Claims 7 and 18

Claims 7 and 18 depend on independent claims 1 and 12, respectively. Therefore, claims 7 and 18 are allowable over Arthurs and Sawey at least for the reasons stated above with regard to claims 1 and 12.

C.   Claim 10

Claim 10 depends on independent claim 1. Therefore, claim 10 is allowable over Arthurs and Sawey at least for the reasons stated above with regard to claim 1.

D.   Claims 11 and 24

Claims 11 and 24 depend on independent claims 1 and 12, respectively. Therefore, claim 11 is allowable over Arthurs and Sawey at least for the reasons stated above with regard to claims 1 and 12. In addition, the combination of Arthurs and

Sawey does not disclose or suggest at least the limitation of "wherein said physical port security bit map is generated dynamically based on a variable parameter," as recited by claims 11 and 24.

With regard to claim 11, the Final Office Action states the following:

> Authurs (*sic.*) and Sawey teach the claimed subject matter [of claim 11]: a method of providing physical port security in a digital communication system (see claim 1 above). Authurs (*sic.*) further discloses that the bit map is generated dynamically (see column 5, lines 58-65, of Authurs (*sic.*)).

(Final OA, p. 4.) The passage of Arthurs' identified by the Examiner reads as follows:

> The format of a typical token generated by the token generator 32 of FIG. 1 is illustrated in FIG. 3. A token comprises two fields, a Source Address Field and an Output Availability Field. The Output Availability Field comprises a bit a_i for each output port 14-i. A logic "1" in a particular bit position of the Output Availability Field indicates that the corresponding output port has been reserved. The token generator emits tokens with a cleared output availability field. The subfield A_l in the Source Address Field of the token is the address of the input port whose packet will be transmitted to the ith output port (i.e. output port 14-i) if the corresponding position a_a in the Output Availability Field is set equal to logic "1".

(Arthurs, col. 5, lines 58-65.) This passage merely explains how the token is generated. It does not disclose or suggest that "said physical port security bit map is generated dynamically based on a variable parameter," as recited in claims 11 and 24.

Accordingly, claims 11 and 24 are allowable over the Arthurs and Sawey at least for the above reasons.

II.   Claims 2-6, 8-9, 13-17, and 19-23 Are Patentable Over Arthurs in View of Sawey and Wiegel

    A.   Rejection of Dependent Claims 6, 17 and 22

Claims 6, 17 and 22 depend on one of independent claims 1 and 12. Wiegel fails to overcome the above-noted deficiencies of Arthurs and Sawey. Therefore, claims 6, 17 and 22 are allowable over Arthurs, Sawey and Wiegel for at least the reasons stated above with regard to claims 1 and 12.

Moreover, with regard to claims 6, 17 and 22, the Final Office Action states the following:

> i. Authurs (*sic.*) and Sawey teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). However, they do not specifically mention the IP address.
>
> ii. Wieget (*sic.*) teaches a graphical network security policy management wherein Wieget (*sic.*) discloses the IP address (see column 2, lines 14 of Wieget (*sic.*)).
>
> iii. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wieget (*sic.*) into the method of Authurs (*sic.*) and Sawey **to use IP address**.
>
> iv. The ordinary skilled person would have been motivated to have applied the teaching of Wieget (*sic.*) into the system of Authurs (*sic.*) and Sawey **to use IP address**, because Authurs (*sic.*) teaches using the information provided in a packet to generate a port bitmap (see column 5, lines 58-65, of Authurs (*sic.*)). And **IP address** is the information contained in the packet. Therefore, Wieget's (*sic.*) teaching could enhance the system of Authurs (*sic.*) and Sawey.

(Final OA, p. 6.) Hence, the Examiner apparently contends that the combination is obvious because Arthurs allegedly teaches "using the information provided in a packet to generate a port bitmap," (which as discussed above it does not do), and Sawey

teaches the use of an IP address. Just because the individual claim elements can be found separately in the prior art does not mean it is obvious to combine these elements in the manner recited in the claims. The Examiner also holds out the possibility that "Wieget's (*sic.*) teaching **could** enhance the system of Authurs (*sic.*) and Sawey" in some unspecified manner. Again, this cursory, unsupported statement is insufficient to establish the obviousness of combining Arthurs, Sawey and Wiegel in the manner suggested in the Office Action.

Further, even if the references are combined, the resulting combination fails to disclose or suggest that "said address information [that is used for generating a destination port bit map] comprises IP address information," as required by claims 6, 17 and 22. The passage of Wiegel that is identified by the Examiner to support the rejection of these claims reads as follows:

> The following example presents a rule set used to program a router to allow traffic across it for **an anonymous file transfer protocol (FTP) server that resides on a network object having an Internet Protocol (IP) address of 192.10.1.2** . . . .

(Wiegel, col. 2, lines 12-16.) Hence, while the cited passage of Wiegel discusses a "**server** that resides on a **network object having an Internet Protocol (IP) address**," it clearly does not, alone or in combination with the other cited references, disclose or suggest that "said address information [that is used for generating a destination port bit map] comprises IP address information," as required by claims 6, 17 and 22.

Accordingly, claims 6, 17 and 22 are allowable over Arthurs, Sawey and Wiegel at least for the above reasons.

B.   Rejection of Dependent Claims 2 and 13

Claims 2 and 13 depend on independent claims 1 and 12, respectively. Wiegel fails to overcome the above-noted deficiencies of Arthurs and Sawey. Therefore, claims 2 and 13 are allowable over Arthurs, Sawey and Wiegel for at least the reasons stated above with regard to claims 1 and 12.

Additionally, the rejections of claims 2 and 13 are improper because the Examiner has failed to articulate any motivation for combining Arthurs, Sawey and Wiegel to arrive at the combination recited in these claims. Rather, to the extent the Examiner even attempts to articulate a motivation for combining these three references, he only does so in the context of claims 6, 17 and 22. As discussed above, the motivation articulated by the Examiner is insufficient even in the context of claims 6, 17 and 22. Moreover, the motivation articulated by the Examiner is specific to inclusion of **IP address information**. It does not relate to the limitation that "comparing comprises a logical AND on said destination port bit map and physical port security map," as recited in claims 2 and 13. Hence, rejections of claims 2 and 13 are improper and should be withdrawn.

Moreover, even if the references are combined in the manner suggested, the resulting combination fails to disclose or suggest that "comparing comprises a logical AND on said destination port bit map and physical port security map," as recited in claims 2 and 13. In rejecting these claims, the Final Office Action states the following:

> Authurs (*sic.*), Sawey, and Wieget (*sic.*) teach the claimed
> subject matter: a method of providing physical port security in
> a digital communication system (see claim 1 above). They

further disclose the logical AND (see column 18, line 7 of Wieget (*sic.*)).

(Final OA, p. 6.) The cited passage of Wiegel merely indicates that "[a] nested IF construct connects two or more conditions, and is equivalent to a logical AND operation." (Wiegel, col. 18, lines 6-7.) The cited passage of Wiegel does not, alone or in combination with the other cited references, disclose or suggest that "comparing comprises a logical AND on said destination port bit map and physical port security map," as recited in claims 2 and 13.

Accordingly, claims 2 and 13 are allowable over Arthurs, Sawey and Wiegel at least for the above reasons.

C.   Rejection of Dependent Claims 3-5, 14-16 and 23

Claims 3-5, 14-16 and 23 depend on independent claims 1 and 12, respectively. Wiegel fails to overcome the above-noted deficiencies of Arthurs and Sawey. Therefore, claims 3-5, 14-16 and 23 are allowable over Arthurs, Sawey and Wiegel for at least the reasons stated above with regard to claims 1 and 12.

Additionally, the rejections of claims 3-5, 14-16 and 23 are improper because the Examiner has failed to articulate any motivation for combining Arthurs, Sawey and Wiegel to arrive at the combination recited in these claims. Rather, to the extent the Examiner even attempts to articulate a motivation for combining these three references, he only does so in the context of claims 6, 17 and 22. As discussed above, the motivation articulated by the Examiner is insufficient even in the context of claims 6, 17 and 22. Moreover, the motivation articulated by the Examiner is specific to inclusion of **IP address information**. It does not relate to the limitations that are recited in claims 3-

5, 14-16 and 23. Hence, rejections of claims 3-5, 14-16 and 23 are improper and should be withdrawn.

Moreover, even if the references are combined in the manner suggested, the resulting combination fails to disclose or suggest the following claim elements:

> Claims 3 and 14: "generating a physical port security bit map using source address information contained in a digital data frame."

> Claims 4 and 15: "generating a physical port security bit map using destination address information contained in a digital data frame."

> Claims 5 and 16: "generating a physical port security bit map using a combination of source and destination address information contained in a digital data frame."

With regard to claims 3-5, 14-16 and 23, the Final Office Action states the following:

> Authurs (*sic.*), Sawey, and Wieget (*sic.*) teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the source address and the destination address (see column 2, lines 8-11, of Weight [*sic*]).

(Final OA, p. 6.) The cited passage of Wiegel reads as follows:

> For example, a router is programmed using a set of router rules that determine whether the router should forward or reject packets based upon the type of packet, originating network location, destination location, and other criteria

(Wiegel, col. 2, lines 7-11.) While this passage is using a set of rules to determine whether a router should forward or reject packets, it does not disclose or suggest, alone or in combination with Arthurs and Sawey, "generating a physical port security bit map

using source address information [or destination address information or a combination of source and destination address information] contained in a digital data frame."

Accordingly, claims 3-5, 14-16 and 23 are allowable over Arthurs, Sawey and Wiegel at least for the above reasons.

D.   Rejection of Dependent Claims 8 and 19

Claims 8 and 19 depend on independent claims 1 and 12, respectively. Wiegel fails to overcome the above-noted deficiencies of Arthurs and Sawey. Therefore, claims 8 and 19 are allowable over Arthurs, Sawey and Wiegel for at least for the reasons stated above with regard to claims 1 and 12.

Additionally, the rejections of claims 8 and 19 are improper because the Examiner has failed to articulate any motivation for combining Arthurs, Sawey and Wiegel to arrive at the combination recited in these claims. Rather, to the extent the Examiner even attempts to articulate a motivation for combining these three references, he only does so in the context of claims 6, 17 and 22. As discussed above, the motivation articulated by the Examiner is insufficient even in the context of claims 6, 17 and 22. Moreover, the motivation articulated by the examiner is specific to those claims. It does not relate to the limitations that are recited in claims 8 and 19.

Accordingly, claims 8 and 19 are allowable over the references cited in the Final Office Action at least for the above reasons.

E.   Rejection of Dependent Claims 9 and 20

Claims 9 and 20 depend on independent claims 1 and 12, respectively. Wiegel fails to overcome the above-noted deficiencies of Arthurs and Sawey. Therefore, claims

9 and 20 are allowable over Arthurs, Sawey and Wiegel for at least the reasons stated above with regard to claims 1 and 12.

Additionally, the rejections of claims 9 and 20 are improper because the Examiner has failed to articulate any motivation for combining Arthurs, Sawey and Wiegel to arrive at the combination recited in these claims. Rather, to the extent the Examiner even attempts to articulate a motivation for combining these three references, he only does so in the context of claims 6, 17 and 22. As discussed above, the motivation articulated by the Examiner is insufficient even in the context of claims 6, 17 and 22. Moreover, the motivation articulated by the Examiner is specific to inclusion of **IP address information**. It does not relate to the limitations that are recited in claims 9 and 20.

Accordingly, claims 9 and 20 are allowable over the references cited in the Final Office Action at least for the above reasons.

F.   Rejection of Dependent Claims 21

Claim 21 depends on independent claim 12. Wiegel fails to overcome the above-noted deficiencies of Arthurs and Sawey. Therefore, claim 21 is allowable over Arthurs, Sawey and Wiegel for at least the reasons stated above with regard to claim 12.

Additionally, the rejection of claim 21 is improper because the Examiner has failed to articulate any motivation for combining Arthurs, Sawey and Wiegel to arrive at the combination recited in this claim. Rather, to the extent the Examiner even attempts to articulate a motivation for combining these three references, he only does so in the context of claims 6, 17 and 22. As discussed above, the motivation articulated by the

Examiner is insufficient even in the context of claims 6, 17 and 22. Moreover, the motivation to combine articulated by the Examiner is specific to inclusion of **IP address information**. It does not relate to the limitations that are recited in claim 21.

Accordingly, claim 21 is allowable over the references cited in the Final Office Action at least for the above reasons.

III. Conclusion

For at least the reasons discussed above, Applicant respectfully submits that the pending claims are allowable. Therefore, the Applicant requests that the Board reverse the rejections of claims 1-24.

The Commissioner is authorized to charge the fee for this Appeal Brief ($540), and any additional fees, or credit overpayment to Deposit Account 13-0017.

Respectfully submitted,

Date: <u>March 25, 2010</u>

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CLAIMS APPENDIX
(37 C.F.R. § 41.37(c)(1)(viii))

1.   A method of providing physical port security in a digital communication system, comprising:

receiving a frame of digital data at a network device;

generating a destination port bit map based on the destination address information contained in said frame of digital data;

comparing said destination port bit map with a physical port security bit map to generate a bit map of allowed destination ports, wherein said physical port security bit map is generated, after said receiving, based on information in said received frame of digital data; and

forwarding said frame of digital data to one or more of said allowed destination ports.

2.   The method of claim 1, wherein said comparing comprises conducting a logical AND on said destination port bit map and physical port security bit map.

3.   The method of claim 1, comprising generating said physical port security bit map using source address information contained in said digital data frame.

4. The method of claim 1, comprising generating said physical port security bit map using destination address information contained in said digital data frame.

5.   The method of claim 1, comprising generating said physical port security bit map using a combination of source and destination address information contained in said digital data frame.

6.   The method of claim 1, wherein said address information comprises IP address information.

7.   The method of claim 1, wherein said frame of digital data is received by a router.

8.   The method of claim 1, wherein said frame of digital data is received by a network file server.

9.   The method of claim 1, wherein said network device comprises one or more physical ports connected to a local area network.

10.   The method of claim 1, wherein said received frame of digital data is received from a process that is inside of said network device.

11.   The method of claim 1, wherein said physical port security bit map is generated dynamically based on a variable parameter.

12.   A system for providing physical port security, comprising:

at least one processor within a network device, said network device having a communications port for receiving digital data from a digital communications system and two or more physical data ports for forwarding said digital data, said at least one of processor enables:

generation of a destination port bit map based on destination address information contained in said received digital data;

comparing of said destination port bit map with a physical port security bit map to generate a bit map of allowed destination ports, wherein said physical port security bit map is generated, after said receiving, based on information within said received digital data; and

forwarding of said digital data to one or more of said allowed destination ports.

13.   The system of claim 12, wherein said at least one processor enables conducting of a logical AND operation on said destination port bit map and said physical port security bit map.

14.   The system of claim 12, wherein said physical port security bit map is generated using source address information contained in said digital data.

15.   The system of claim 12, wherein said physical port security bit map is generated using destination address information contained in said digital data.

16.   The system of claim 12, wherein said physical port security bit map is generated from a table of stored allowed physical port addresses that varies depending on a combination of source and destination address information contained in said digital data.

17.   The system of claim 12, wherein said address information comprises IP address information.

18.   The system of claim 12, wherein said network device comprises a router.

19.   The system of claim 12, wherein said network device comprises a network file server.

20.   The system of claim 12, wherein said two or more physical data ports of said network device are connected to a local area network.

21.   The system of claim 12, wherein said digital data comprises IP data.

22.   The system of claim 12, wherein said at least one processor retrieves said physical port security bit map based on IP source address contained in said digital data.

23.   The system of claim 12, wherein said network device is the source of said received digital data.

24.   The system of claim 12, wherein said physical port security bit map is dynamically altered based on a variable parameter.

EVIDENCE APPENDIX
(37 C.F.R. § 41.37(c)(1)(ix))

- U.S. 4,896,934 ("Arthurs"), entered into record in Office Action dated December 10, 2008.

- U.S. 7,151,777 ("Sawey"), entered into record in Office Action dated June 8, 2009.

- U.S. 6,484,261 ("Wiegel"), entered into record in Office Action dated October 19, 2007.

RELATED PROCEEDINGS APPENDIX
(37 C.F.R. § 41.37(c)(1)(x))

The Appellant is unaware of any related appeals or interferences.